Mr. Aaron Wiley
Vinings Industries, Inc.
315 North Madison Street
Fortville, Indiana 46040

Re: 059-15477
Minor Source Modification to:
Part 70 permit No.: T059-7362-00009

Dear Mr. Wiley:

Vinings Industries, Inc. was issued Part 70 operating permit T059-7362-00009 on February 16, 2000 for an inorganic chemical production source. An application to modify the source was received on January 23, 2002. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

(a) One (1) natural gas-fired low NOx boiler, with a maximum heat input capacity of 12.0 million British Thermal Units per hour (mmBtu/hr). This boiler will replace the existing 6.0 mmBtu/hr natural gas-fired boiler.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Management (OAM).

2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

The source may begin construction when the source modification has been issued. The source must comply with the requirements of 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12 before operation of any of the proposed emission units can begin.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter call (800) 451-6027, press 0 and ask for Aida De Guzman or extension (3-4972), or dial (317) 233-4972.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments
APD
cc: File - Hancock County
Hancock County Health Department
Air Compliance Section Inspector - D.J. Knotts
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner

PART 70 MINOR SOURCE MODIFICATION
OFFICE OF AIR QUALITY

Vinings Industries, Inc.
315 North Madison Street
Fortville, Indiana 46040

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

First Minor Source Modification No.: 059-15477-00009	
Issued by: Original signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: March 15, 2002

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

(a) One (1) natural gas-fired low NOx boiler, with a maximum heat input capacity of 12.0 million British Thermal Units per hour (mmBtu/hr). This boiler will replace the existing 6.0 mmBtu/hr natural gas-fired boiler.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 Particulate Matter Limitation (PM) [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate emission limitations for sources of indirect heating), the particulate matter (PM) emissions from the new 12.0 mmBtu/hr natural gas-fired boiler shall be limited to 0.57 pound per million British thermal units (lb/mmBtu). This PM emissions shall be determined using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where: Pt = Pounds of particulate matter emitted per million Btu (lb/mmBtu) heat input.
Q = Total source maximum operating capacity rating in million Btu per hour (mmBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit, in which case, the capacity specified in the operating permit shall be used.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.2 Record Keeping Requirements [326 IAC 12 and 40 CFR Part 60]

Pursuant to the New Source Performance Standards (NSPS), 326 IAC 12 and 40 CFR Part 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, the owner or operator of the new 12.0 mmBtu/hr natural gas-fired boiler is subject to the following:

(a) Under Subsection (g) § 60.48c, the owner or operator of the boiler shall maintain records of the amounts of fuel combusted during each month.

(b) Under Subsection (i) § 60.48c, all records required in this Section shall be maintained by the owner or operator of the boiler for a period of two (2) years following the date of such record.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.3 Reporting Requirements [326 IAC 12 and 40 CFR Part 60]

(a) Pursuant to the New Source Performance Standards (NSPS), 326 IAC 12 and 40 CFR Part 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, the owner or operator of the new 12.0 mmBtu/hr natural gas-fired boiler shall submit the following report:

(1) Commencement of construction date (no later than 30 days after such date);

(2) Anticipated start-up date (30 days prior to such date);

(3) Actual start-up date (within 15 days after such days);

The report shall include the following:

(1) The design heat input capacity of the boiler and identification of the fuel to be combusted; and

(2) the annual capacity factor at which the owner or operator anticipates operating the boiler, based on all fuels fired and based on individual fuel fired.

(b) A certification, signed by the responsible official, that certifies all of the fuels combusted during the period. The natural gas-fired boiler certification does require the certification by the Aresponsible official@ as defined by 326 IAC 2-7-1(34).

(c) The natural gas boiler certification shall be submitted to the address listed in Section C - General Reporting Requirements, of the Part 70 permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the six (6) month period being reported.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
SEMI-ANNUAL NATURAL GAS FIRED BOILER CERTIFICATION

Source Name: Vinings Industries, Inc.
Source Address: 315 North Madison St., Fortville, Indiana 46040
Mailing Address: 315 North Madison St., Fortville, Indiana 46040
First Minor Source Modification: 059-15477
Part 70 Permit No.: 059-7362-00009

9 Natural Gas Only **9** Alternate Fuel burned From:_____ To:_____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Signature:
Printed Name:
Title/Position:
Phone:
Date:

A certification by the responsible official as defined by 326 IAC 2-7-1(34) is required for this report.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Minor Source Modification

Source Background and Description

Source Name:	Vinings Industries, Inc.
Source Location:	315 North Madison Street, Fortville, Indiana
County:	Hancock
SIC Code:	2819
Operation Permit No.:	T059-7362-00009
Operation Permit Issuance Date:	February 16, 2002
Minor Source Modification No.:	059-15477-00009
Permit Reviewer:	Aida De Guzman

The Office of Air Quality (OAQ) has reviewed a modification application from Vinings Industries, Inc., an inorganic chemical manufacturing source relating to the construction of the following emission unit:

(a) One (1) natural gas-fired low NOx boiler, with a maximum heat input capacity of 12 million British Thermal Units per hour (mmBtu/hr). This boiler will replace the existing 6.0 mmBtu/hr natural gas-fired boiler.

History

On January 23, 2002, Vinings Industries, Inc. submitted an application to the OAQ requesting to add a new boiler to replace the existing old boiler. Vinings Industries, Inc. was issued a Part 70 permit on February 16, 2000.

Recommendation

The staff recommends to the Commissioner that the Part 70 Minor Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on January 23, 2002.

Emission Calculations

(a) Boiler Emissions: See Page 1 of 1 TSD Appendix A for detailed emissions calculations.

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	0.1
PM-10	0.4
SO_2	0.0
VOC	0.3
CO	4.4
NO_x	2.6

Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Minor Source Modification, pursuant to 326 IAC 2-7-10.5(d)(6), since the new boiler is subject to the new source performance standard (NSPS).

County Attainment Status

The source is located in Hancock County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	not determined

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Hancock County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Hancock County has been classified as attainment or unclassifiable for all the other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity as reflected in the issued Part 70 permit):

Pollutant	Emissions (tons/year)
PM	96.6
PM-10	91.6
SO_2	1.10
VOC	3.91
CO	16.9
NOx	121

(a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	HAPs
12 mmBtu/hr Boiler	0.1	0.4	0.0	0.3	4.4	2.6	0.0
TOTAL	0.1	0.4	0.0	0.3	4.4	2.6	0.0

This modification to an existing minor stationary source is not major because the emission increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Federal Rule Applicability

(1) New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60):
40 CFR Part 60.40c, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 100 mmBtu/hr or less , but greater than or equal to 10 mmBtu/hr.

The new 12 mmBtu/hr natural gas-fired boiler is subject to § 60.48c Subsections (a), (g) and (i) of this NSPS.

(a) Under Subsection (a) of § 60.48c, the owner or operator of the boiler shall submit notification of the date of construction, or reconstruction, anticipated startup and actual startup as provided by § 60.7 of this part. The notification shall include:

(1) The design heat input capacity of the boiler and identification of the fuel to be combusted; and

(2) the annual capacity factor at which the owner or operator anticipates operating the boiler, based on all fuels fired and based on individual fuel fired.

(b) Under Subsection (g) § 60.48c, the owner or operator of the boiler shall maintain records of the amounts of fuel combusted during each month.

(c) Under Subsection (i) § 60.48, all records required in this Section shall be maintained by the owner or operator of the boiler for a period of two (2) years following the date of such record.

(2) There are no other New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

(3) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this proposed modification.

State Rule Applicability - Individual Facilities

(1) 326 IAC 6-2-4 (Particulate Emissions Limitation for Sources of Indirect Heating)
This rule is applicable to indirect heating units constructed after September 21, 1983. The12 mmBtu/hr natural gas-fired boiler is subject to this rule. This rule mandates a PM emissions limit using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where: Pt = Pounds of particulate matter emitted per million Btu (lb/mmBtu) heat input.
Q = Total source maximum operating capacity rating in million Btu per hour (mmBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit, in which case, the capacity specified in the operating permit shall be used.

$$Pt = \frac{1.09}{Q^{0.26}}$$
$$= \frac{1.09}{(12)^{0.26}}$$
$$= 0.57 \text{ lb/mmBtu}$$

Using Natural gas as fuel:
0.1 tons/yr, PM emissions fr. boiler * 2000 lb/ton * yr/105.1 MMCF, throughput * MMCF/1000 mmBtu = 0.0019 lb/mmBtu < 0.57 lb/mmBtu. Therefore, the boiler is in compliance with this rule.

(2) 326 IAC 6-3-2 (Process Operations)
Boilers are exempted from this rule.

(3) 326 IAC 7-1 (Sulfur Dioxide)
This rule applies to all facilities with potential to emit twenty-five (25) tons per year or ten (10) pounds per hour of sulfur dioxide and shall comply with the limitation in section 326

IAC 7-2 . This boiler is not subject to 326 IAC 7-1 since its SO2 emission is less than 25 tons per year or is less than 10 pounds per hour.

(4) 326 IAC 10-1-1 (Nitrogen Oxides Control in Clark and Floyd Counties)
The boiler is not subject to this rule as it is not located in county subject to326 IAC 10-1-1.

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached **Part 70 Minor Source Modification No. 059-15477-00009.**

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler

Company Name: **Vinings Industries, Inc.**
Address City IN Zip: **315 North Madison St., Fortville, Indiana 46040**
First Minor Source Modification: **059-15477**
Plt ID: **059-00009**
Reviewer: **Aida De Guzman**
Date Application Received: **January 23, 2002**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
12.0	105.1

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	50.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.1	0.4	0.0	2.6	0.3	4.4

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).